

REMARKS/ARGUMENTS

The present Amendment is responsive to the non-final Office Action mailed September 17, 2008 in the above-identified application.

New claims 21-26 are added so as more fully to claim patentable aspects of applicant's invention. Therefore, claims 1-26 are the claims currently pending in the present application.

Claims 1 and 3-18 are amended to clarify features recited thereby. Further, claims 2, 19 and 20 are amended to conform them more closely to U.S. style. These amendments are fully supported by applicant's disclosure.

Applicant thanks the Examiner for acknowledging the claim for foreign priority and receipt of the priority document. Further, applicant thanks the Examiner for acknowledging review and consideration of the references cited in the Information Disclosure Statement filed on August 16, 2006.

Rejection of Claims 1, 4, 7, 8, 10, 11, 13, 15 and 17 under 35 U.S.C. § 112, Second Paragraph

Claims 1, 4, 7, 8, 10, 11, 13, 15 and 17 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite on the ground that these claims recite a broad recitation followed by one or more preferable ranges which are a narrower statement of range/limitation.

Claims 1, 4, 7, 8, 10, 11, 13, 15 and 17 are amended.

Rejection of Claims 1, 2, 6-15 and 18-20 under 35 U.S.C. § 103

Claims 1, 2, 6-15 and 18-20 are rejected under 35 U.S.C. § 103 as being obvious from Wright, European Patent Application Publication No. 0887129. Reconsideration of this rejection is respectfully requested.

A problem recognized and solved according to an aspect of applicant's invention as claimed in claim 1 is that, during a period of time during which the empty melt vessel is replaced by a full melt vessel, the bath level in the tundish continuously decreases because the discharge of the molten melt from the tundish into the mold is continued. Further, when the feeding of the melt is restarted again from the newly positioned full melt vessel into the tundish, a quick increase of the bath level until a quasi-steady-state operation bath level is reached, which can result in an intensive melt feeding to the tundish and, as a result, an increasing of the transfer of foreign particles, such as slag or refractory material, into the mold.

Without intending to limit the scope of the claims, according to an aspect of applicant's invention as claimed in claim 1, during the first period of time, defined as the time period between the resumption of the feeding of the metal melt into the tundish and the point at which the quasi-steady-state operation bath level in the tundish is reached again, feeding is optimized such that an inflow rate into the tundish is greater than the outflow rate out of the tundish, as detailed in claim 1.

Claim 1 requires a sequence casting process for the continuous production of a high-purity cast metal strand from a metal melt, comprising feeding the metal melt into the tundish, wherein during a first period of time from a resumption of the feeding of the metal melt into the tundish until a point at which a quasi-steady-state operation bath level in the tundish is reached, an inflow rate into the tundish is greater than an outflow rate out of the tundish, and such that for 70 % to 100 % of the first period of time the inflow rate into the tundish is less than or equal to double the outflow rate out of the tundish.

Wright discloses a method of casting in which the molten material is fed from the source to the vessel for only a part of the time of casting, for instance, for less than 75% of the time of casting, and that tilting the tundish achieves the purpose of keeping constant the head of molten material over the outlet passage from the vessel (Wright, Abstract). Wright discloses that the bath level 50 in the tundish 22 is kept constant during the exchange of feeding vessel 20, and that the tilting movement of the tundish allows the continuous outflow rate of metal melt within the exchange time period (the time period during which the melt vessel is exchanged) (Wright, Figs. 3 and 4a-c and claim 3). Thus, Wright discloses that the tilting movement allows a reduction of molten metal volume despite the constant bath level.

Wright is silent with respect to defining a time period for a resumption of the feeding of the metal melt into the tundish to the point at which the operation bath level in the tundish reaches a quasi-steady-state operation bath level, as required by claim 1 (the first period of time defined by claim 1). That is, while Wright describes a relationship between the time during which the molten material is fed from the source vessel into the tundish and the casting time during which the molten material is transferred from the tundish into the casting location (Wright, column 4, lines 2-14), Wright is silent with respect to any relationship between the inflow rate and the first period of time as defined by claim 1. This is made clear by the fact that Wright is concerned with keeping the bath level constant (*see*, for example, the above-discussed

teaching of Wright with respect to the tilting movement of the tundish). Thus, Wright does not disclose or suggest the recitations of claim 1. The attached International Preliminary Report on Patentability in the corresponding PCT application, PCT/EP2004/012711, filed November 10, 2004, mailed November 9, 2006, also acknowledges that the above-cited feature of claim 1 patentably distinguishes the claim over the Wright reference.

Claims 2, 6-15 and 18-20 depend from claim 1 and are therefore patentably distinguishable over the cited art for at least the same reasons.

Rejection of Claims 3-5, 16 and 17 under 35 U.S.C. § 103

Claims 3-5, 16 and 17 are rejected under 35 U.S.C. § 103 as being obvious from Wright in view of Melville et al., U.S. Patent No. 5,887,647. Reconsideration of this rejection is respectfully requested.

Melville does not cure the above-discussed deficiencies of Wright as they relate to the above-cited features of claim 1. Therefore, even taken together in combination, Wright and Melville do not disclose or suggest the recitations of claim 1.

Claims 3-5, 16 and 17 depend from claim 1, and are therefore patentably distinguishable over the cited art for at least the same reasons.

New Claims

New claims 21-26 are added so as more fully to claim patentable aspects of applicant's invention. New claims 21-26 are fully supported by the Applicant's disclosure, see, for example, claims 1, 4 and 7 prior to the present Amendment.

Claims 21-26 depend from claim 1 and are therefore patentably distinguishable over the cited art for at least the same reasons.

In view of the foregoing, withdrawal of the rejections and allowance of the claims of the application are respectfully requested.

THIS CORRESPONDENCE IS BEING
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RCF:GB:ns

Respectfully submitted,



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